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### NOTICE OF ALLOWANCE AND FEE(S) DUE

7590 10/01/2008

MCDERMOTT, WILL & EMERY 600 13th Street, N.W.

Washington, DC 20005-3096

EXAMINER					
VALENTIN, JUAN D					
ART UNIT	PAPER NUMBER				

2877 DATE MAILED: 10/01/2008

ſ	APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
	10/765,207	01/28/2004	Francesco Braghiroli	66396-130	7645

TITLE OF INVENTION: METHOD AND APPARATUS FOR OPTICALLY SCANNING A PNEUMATIC TIRE OF A VEHICLE WHEEL

APPLN, TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1440	\$300	\$0	\$1740	01/02/2009

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 1SI. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

### HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FFE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

### PART B - FEE(S) TRANSMITTAL

## Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450

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INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where

indicated unless correct maintenance fee notifica	ed below or directed otl ttions.	ng the Patent, advance of nerwise in Block 1, by ( lock 1 for any change of address)	a) specifying a new o	Note	pondence address :: A certificate of	and/or	(b) indicating a sepa	rate "FEE	c mailings of the
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nonprovisional	NO	\$1440	\$300		\$0		\$1740	C	01/02/2009
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(A) NAME OF ASSI	less an assignee is ident th in 37 CFR 3.11. Comp GNEE	ified below, no assignee pletion of this form is NC	data will appear on t of a substitute for filin (B) RESIDENCE: (O	he pa g an :	atent. If an assign assignment. and STATE OR (	OUNT	'RY)		
Please check the appropr	riate assignee category or	categories (will not be p	rinted on the patent):	_	Individual UC	orporati	on or other private gro	oup entity	Government
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Publication Fee (N	Payment by credit card. Form PTO-2038 is attached.								
Advance Order -	# of Copies		The Director is he overpayment, to l	reby Depor	authorized to cha sit Account Numb	ge the	required fee(s), any de (enclose a	ficiency, o n extra cop	or credit any py of this form).
5. Change in Entity Sta	itus (from status indicate as SMALL ENTITY stati		☐ b. Applicant is no	long	ger claiming SMA	LLEN	FITY status. See 37 Cl	R 1.27(g)	)(2).
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### UNITED STATES PATENT AND TRADEMARK OFFICE

#### UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO. CONFIRMATION N		
10/765,207	01/28/2004	Francesco Braghiroli	66396-130 7645		
75	90 10/01/2008	EXAMINER			
MCDERMOTT,	WILL & EMERY	VALENTE	N, JUAN D		
600 13th Street, N.W. Washington, DC 20005-3096			ART UNIT PAPER NUMBER		
			2877		

### Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 241 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 241 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

# Notice of Allowability

pplication No.	Applicant(s)	_
0/765,207	BRAGHIROLI, FRANCESCO	
xaminer	Art Unit	
UAN D VALENTIN	2877	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address-All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included
herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. THIS
NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS. This application is subject to withdrawal from issue at the initiative
of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

- This communication is responsive to 06/24/2008.
- The allowed claim(s) is/are 1,3,4,6,7 and 9.
- 3. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) 

    All b) 

    Some\* c) 

    None of the:
    - 1. A Certified copies of the priority documents have been received.
    - 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_
    - Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
  - \* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

- 4. A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
- 5. CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) Thereto or 2) to Paper No./Mail Date
  - (b) including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

 DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

### Attachment(s)

- 1. Notice of References Cited (PTO-892)
- 2. 
  Notice of Draftperson's Patent Drawing Review (PTO-948)
- Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date 1/28/2004
- Examiner's Comment Regarding Requirement for Deposit of Biological Material
- 5. Notice of Informal Patent Application
- Interview Summary (PTO-413), Paper No./Mail Date .
- 7. X Examiner's Amendment/Comment
- 8. X Examiner's Statement of Reasons for Allowance
- 9. 🔲 Other \_\_\_\_

### DETAILED ACTION

### EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or
additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR.
 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the
payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Michael A. Messina (Reg. No. 33,424) on September 18, 2008.

The application has been amended as follows:

- · Claim 1 has been replaced with the following:
- A method of optically scanning a pneumatic tire of a vehicle wheel the method comprising the steps of:

rotating the vehicle wheel about a stationary axis;

scanning the surface of the pneumatic tire while the wheel is rotating by emitting three light beams from three given positions onto the surface of the pneumatic tire forming a light spot in each given position;

receiving three beams reflected by the surface of the pneumatic tire corresponding to each of the three light beams for measuring the distance of each of the light spots relative to a reference position;

measuring a rotary angle position of the vehicle wheel associating with the measured distances: and

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determining dimensions and positions of the pneumatic tire or constituent parts of the pneumatic tire based on the measured distances of the three light spots and the associated rotary angle position of the vehicle;

wherein one of the light beams scans the tire tread surface, and the other two of the light beams scans the tire side walls at the inside and the outside of the wheel such that all <u>external</u> surface spots of the tire are scanned.

- Claim 7 has been replaced with the following:
- 7. An apparatus for optically scanning a pneumatic tire of a vehicle wheel that is rotatably mounted on a measuring shaft of a wheel balancing machine, comprising:

three sensor devices, each comprising a light source that emits a light beam configured to scan the surface of the pneumatic tire while the wheel is rotating to form at least one light spot on the tire surface, and a receiver movable together with the light source, wherein the receiver is configured to receive a beam reflected by the surface of the pneumatic tire while the wheel is rotating, and produce a signal based on the receiving position of the reflected beam at the receiver, and wherein each light source and corresponding receiver are movable together into given positions relative to the measuring shaft for measuring the distance of the at least one light spot relative to a reference position;

a rotary angle sensor, coupled to the measuring shaft, for generating a rotary angle associated with the at least one light spot of each sensor based on the rotation of the measuring shaft and the vehicle wheel; and

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a computer-aided evaluation device, coupled to the rotary angle sensor and the receivers, for ascertaining dimensions and positions of the pneumatic tire or constituent parts of the pneumatic tire based on the measured distance of the at least one light spot of each sensor and the associated rotary angle position of the rotating vehicle wheel:

wherein one of the sensor devices is configured to scan the tire tread surface, and the other two of the sensor devices are configured to scan the tire side walls at the inside and the outside of the wheel such that all <a href="mailto:external">external</a> surface spots of the tire are scanned, and the sensor devices are attached to movable components of a wheel balancing machine.

- Claim 9 has been replaced with the following:
- 9. A method using three light beams for optically scanning a pneumatic tire of a vehicle wheel that is rotatably mounted to a stationary axis, in which a light beam is directed from each of three given positions on to the surface of the pneumatic tire while the wheel is rotating, and an associated reflected beam is received at each of the three given positions, wherein dimensions and positions of the pneumatic tire or constituent parts of the pneumatic tire are ascertained based on the directions of the emitted light beams and the reflected beams;

wherein one of the light beams scans the tire tread surface, and the other two of the light beams scans the tire side walls at the inside and the outside of the wheel such that all <u>external</u> surface spots of the tire are scanned.

### Allowable Subject Matter

2. Claims 1, 3, 4, 6, 7, and 9 are allowed over prior art of record.

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The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 1, the prior art fails to disclose or make obvious "wherein one of the light beams scans the tire tread surface, and the other two of the light beams scans the tire side walls at the inside and the outside of the wheel such that all external surface spots of the tire are scanned" and in combination with the other recited limitations of claim 1. Claims 3, 4, and 6 are allowed by virtue of dependency on the allowed claim 1.

Regarding claim 7, the prior art fails to disclose or make obvious "wherein one of the sensor devices is configured to scan the tire tread surface, and the other two of the sensor devices are configured to scan the tire side walls at the inside and the outside of the wheel such that all external surface spots of the tire are scanned, and the sensor devices are attached to movable components of a wheel balancing machine" and in combination with the other recited limitations of claim 7.

Regarding claim 9, the prior art fails to disclose or make obvious "wherein one of the light beams scans the tire tread surface, and the other two of the light beams scans the tire side walls at the inside and the outside of the wheel such that all external surface spots of the tire are scanned" and in combination with the other recited limitations of claim 9.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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### Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JUAN D. VALENTIN whose telephone number is (571)272-2433. The examiner can normally be reached on Mon.-Fri..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley, Jr. can be reached on (571) 272-2800 ext. 77. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Gregory J. Toatley, Jr./ Supervisory Patent Examiner, Art Unit 2877 9/21/08 Juan D Valentin II Examiner Art Unit 2877

/JDVII/ September 19, 2008